

REMARKS

This is a response to the Office Action mailed on July 23, 2008, in this application. Claims 1-19 are presented for examination. Claims 5, 6, 8, 10, 16, and 19 have been amended to more distinctly claim that which Applicant regards as his invention. No new matter has been added. Individual issues raised in the Office Action are addressed next.

Claim Rejections under 35 U.S.C. § 112

Claims 5, 6, 8, 10, 16, 18, and 19 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite and unclear. Claims 5, 6, 8, 10, 16, 18, and 19 have been carefully reviewed and amended as necessary to ensure that they conform with the requirements of 35 U.S.C. § 112, second paragraph, with particular attention to the points raised by the Examiner. It is believed that the rejections under 35 U.S.C. § 112 have been thereby obviated, and their withdrawal is therefore respectfully requested.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1, 7, and 18 were rejected under 35 U.S.C. § 103(a) as obvious over Yamada (JP 02-106144) combined with prior art discussed in the specification. Claims 2-6 and 9-19 were rejected under 35 U.S.C. § 103(a) as obvious over Yamada combined with various combinations of Guskov (US6,536,240), Yamazaki (US2002/0029592), Schmitt (US5,879,947), Takeyama (JP 09-066117), and Collins (US5,078,922). Applicants respectfully disagree.

A finding of obviousness requires that “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C. §103(a). In *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 82 USPQ2d 1385 (2007), the Supreme Court stated that the following factors set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966) still control an obviousness inquiry: (1) the scope and content of the prior art; (2) the differences between the prior art and the claimed invention; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *KSR*, 127 S.Ct. at 1734, 82 USPQ2d at 1388 quoting *Graham*, 383 U.S. at 17-18, 14 USPQ at 467.

The *KSR* Court rejected a rigid application of the “teaching, suggestion, or motivation [TSM]” test previously applied by the Court of Appeals for the Federal Circuit. *KSR*, 127 S. Ct. at 1739 USPQ2d at 1395. However, the Supreme Court affirmed that it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does...because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” *KSR*, 127 S.Ct. at 1741, 82 USPQ2d at 1396. Once the *Graham* factors have been addressed, the Examiner may apply the TSM test, asking whether (1) a teaching, suggestion or motivation exists in the prior art to combine the references cited, and (2) one skilled in the art would have a reasonable expectation of success. See USPTO Guidelines at 57534.

Further, in order to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Additionally, in considering a prior art reference, the reference must be considered in its entirety, *i.e.*, as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

Moreover, it is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983). Indeed, “an applicant may rebut a *prima facie* case of obviousness by showing that the prior art teaches away from the claimed invention *in any material respect*.” *In re Peterson*, 315 F.3d 1325, 1331 (Fed. Cir. 2003). (Emphasis added.)

The primary reference relied upon to reject all of the claims under 35 U.S.C. § 103(a) is Yamada, JP 02-106144. This Japanese patent document is entitled “Fireproof device for electrical rotary machine” and discloses a device to prevent fires in electrical rotary machines (*i.e.*, motors and generators) that are cooled by being filled with hydrogen gas. If hydrogen gas should leak through a shaft seal into the bearing chamber, thus presenting the danger of flammable hydrogen being ignited by a hot bearing, various valves are opened to flood the bearing chamber with an inert gas.

It should first be noted that Yamada is from an entirely different technical art area (electrical motors and generators as opposed to the fiber optic cable art of the present application). Thus, even if Yamada did supply all the missing elements of claim 1 (which it

does not) it would not occur to a skilled worker in the fiber optic cable manufacturing art to attempt to combine an electrical generator or portions thereof with optical fiber manufacturing apparatus, even if that could be done technically (which it could not).

Further, Yamada fails to disclose, teach, or suggest various features of claim 1. Yamada fails to disclose or suggest the final limitation “whereby the inside of the sealing chamber is kept in an inert gas atmosphere.” In Yamada, inert gas is only introduced into the bearing chamber for fire-suppression purposes “[u]pon leakage of hydrogen gas through the shaft seal,” and thus it is not *kept* in an inert gas atmosphere. This difference also constitutes teaching away, which would suffice to rebut a *prima facie* case of obviousness, even if one had been made (which it has not).

Further, the bearing chamber of Yamada does not meet or suggest the limitation “a sealing chamber surrounding an area including the rotary connector in order to isolate the area including the rotary connector from the external atmosphere.” Yamada is not concerned, as is the invention recited in claim 1, with keeping atmospheric moisture *out*, but only with keeping hydrogen *inside* the motor or generator, by means of the shaft seal 4. Thus, Yamada notes that “the hydrogen gas is sealed by means of a shaft seal 4 at the inside of the bearing chamber” but makes no provision for sealing out atmospheric gases, for example at the other end of the bearing chamber, away from the generator. Accordingly, Yamada does not teach or suggest any limitation related to isolating a rotary connector from the *external* atmosphere. This also constitutes a teaching away.

Because Yamada does not disclose, teach, or even suggest at least these elements of claim 1, and in fact teaches away, claim 1 is not obvious in view of Yamada and admitted prior art. The rejection of claim 1 under 35 U.S.C. § 103(a) should therefore be withdrawn. Because claims 2-19 are dependent claims depending from claim 1, the rejections of these claims should also be withdrawn, for at least this reason.

Conclusion

In view of the above, applicants respectfully submit that the present application is in condition for allowance. A favorable disposition to that effect is respectfully requested.

As noted in the accompanying Petition for Extension of time, a fee of \$1110 is believed to be due with this submission. Please charge this fee or any other fee that may be due or credit any overpayment to Jones Day Deposit Account No. 50-3013.

Should the Examiner have any questions or comments concerning this submission, she is invited to call the undersigned at the phone number listed below.

Date: January 23, 2009

Respectfully submitted,



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